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APPENDIX B  
PENDING CLAIMS

- 1        1. (Twice amended) A mutant antibody comprising a reactive site not present in  
2 the wild-type of said antibody and six complementarity determining regions (CDRs) that recognize a  
3 metal chelate or portions thereof, wherein said reactive site is in a position proximate to or within  
4 said complementarity-determining regions,  
5                wherein said reactive site is the mutation and,  
6                wherein said reactive site interacts with a reactive group selected from carboxyl  
7 groups, hydroxyl groups, haloalkyl groups, dienophile groups, aldehyde groups, ketone groups,  
8 sulfonyl halide groups, thiol groups, amine groups, sulphydryl groups, alkene groups, and epoxide  
9 groups.
- 1        2. The mutant antibody according to claim 1, wherein said reactive site is a side-  
2 chain of a naturally occurring or non-naturally occurring amino acid.
- 1        3. The mutant antibody according to claim 2, wherein said reactive site is the  
2 -SH group of cysteine.
- 1        10. (Once amended) A polypeptide comprising a peptide sequence according to  
2 SEQ. ID NO.:5 (FIG. 12).
- 1        11. A polypeptide comprising a peptide sequence according to SEQ. ID NO.: 7  
2 (FIG. 14).
- 1        14. (Twice amended) The mutant antibody according to claim 1, wherein said  
2 mutant antibody is a mutant of the antibody deposited as ATCC Deposit No. PTA-4696.
- 1        15. The mutant antibody according to claim 14, wherein serine-95 of the light-  
2 chain is substituted by a cysteine residue.
- 1        16. The mutant antibody according to claim 1, wherein said antibody is a  
2 bifunctional antibody further comprising a second complementarity-determining region that  
3 specifically binds to a cell-surface antigen.
- 1        17. The mutant antibody according to claim 1, further comprising a targeting  
2 moiety covalently attached thereto.

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18. The mutant antibody according to claim 17, having the structure:

Ab-L-T

3 wherein,

4 Ab represents said antibody;

5 L is a chemical bond or linking group; and

6 T is said targeting moiety.

1                   19. The mutant antibody according to claim 17, wherein said targeting moiety is  
2 an antibody that binds specifically to a cell surface antigen.

1                   20. The mutant antibody according to claim 1, further comprising said metal  
2 chelate bound to said complementarity-determining region, wherein said chelate comprises a  
3 reactive functional group of complementary reactivity to said reactive site of said antibody.

1                   21. (Once amended) The mutant antibody according to claim 20, further  
2 comprising a covalent bond formed by reaction of said reactive site of said antibody and said  
3 reactive functional group of said chelate.

1                   22. (Once amended) The mutant antibody according to claim 20, wherein said  
2 reactive group of said chelate is an acrylamido moiety.

1                   **23.**       The mutant antibody according to claim 1, wherein said metal chelate is a  
2 polyaminocarboxylate chelate of a metal ion selected from the group consisting of transition metal  
3 ions and lanthanide ions.

1                   24. A pharmaceutical composition comprising the mutant antibody according to  
2 claim 17, and a pharmaceutically acceptable carrier.

1                   25. (Twice amended) A mutant antibody comprising a cysteine residue not  
2 present in the wild-type of said antibody and six complementarity determining regions (CDRs) that  
3 recognize a metal chelate or portions thereof, wherein said cysteine is in a position proximate to or  
4 within said complementarity-determining regions, wherein said cysteine residue is the mutation.

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1           **30.**   The antibody according to claim 25, wherein said antibody is a bifunctional  
2   antibody further comprising a second complementarity-determining region that specifically binds to  
3   a cell-surface antigen.

1           **31.**   The mutant antibody according to claim 25, further comprising a targeting  
2   moiety covalently attached thereto.

1           **32.**   The mutant antibody according to claim 31, having the structure:

2                         Ab-L-T

3                         wherein,

4                         Ab represents said antibody;

5                         L is a chemical bond or linking group that may contain one or more functional  
6                         groups; and

7                         T is said targeting moiety

1           **33.**   The mutant antibody according to claim 31, wherein said targeting moiety is a  
2   member selected from the group consisting of antibodies and antibody fragments, each of which  
3   bind specifically to a cell surface antigen.

1           **34.**   The mutant antibody according to claim 25, further comprising said metal  
2   chelate bound to said complementarity-determining region, wherein said chelate comprises a  
3   reactive functional group of complementary reactivity to the -SH side-chain of said cysteine  
4   residue.

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1           **35.** The mutant antibody according to claim 34, further comprising a covalent  
2 bond formed by reaction of the -SH side-chain of cysteine and said reactive functional group of said  
3 chelate.

1           **36.** The mutant antibody according to claim 35, wherein said reactive functional  
2 group of said chelate is an acrylamido moiety.

1           **37.** The mutant antibody according to claim 25, wherein said metal chelate is a  
2 polyaminocarboxylate chelate of a metal ion selected from the group consisting of transition metal  
3 ions and lanthanide ions.

1           **38.** A pharmaceutical composition comprising the mutant antibody according to  
2 claim 31, and a pharmaceutically acceptable carrier.

1           **42.** (Once amended) A mutant antibody comprising a reactive site not present in  
2 the wild-type of said antibody and six complementarity determining regions (CDRs) that specifically  
3 bind a metal chelate, wherein said reactive site is in a position proximate to or within said  
4 complementarity-determining regions,

5           wherein said reactive site is the mutation and,

6           wherein said reactive site interacts with a reactive group selected from carboxyl  
7 groups, hydroxyl groups, haloalkyl groups, dienophile groups, aldehyde groups, ketone groups,  
8 sulfonyl halide groups, thiol groups, amine groups, sulphydryl groups, alkene groups, and epoxide  
9 groups.

1           **43.** (Once amended) A mutant antibody comprising a reactive site not present in  
2 the wild-type of said antibody and six complementarity determining regions (CDRs) that recognize a  
3 metal chelate comprising a reactive group or portions thereof, wherein said reactive site is in a  
4 position proximate to or within said complementarity-determining region,

5           wherein said reactive group has complementary reactivity to said reactive site of said  
6 antibody,

7           wherein said reactive site is the mutation, and

8           wherein said reactive group is selected from carboxyl groups, hydroxyl groups,  
9           haloalkyl groups, dienophile groups, aldehyde groups, ketone groups, sulfonyl halide groups, thiol  
10          groups, amine groups, sulphydryl groups, alkene groups, and epoxide groups.

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1           **44.** (New) The mutant antibody according to claim 1, wherein said mutant  
2 antibody is a mutant of CHA255.